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United States Department of Agriculture.

OFFICE OF THE SECRETARY.—Circular No. 35.

THE ADULTERATION AND MISBRANDING OF THE SEEDS OF ALFALFA, RED CLOVER, KENTUCKY BLUEGRASS, ORCHARD GRASS, AND REDTOP.

During the calendar year 1910 seeds of orchard grass, Kentucky bluegrass, and redbtop were secured in the open market in accordance with the following paragraph in the act of Congress making appropriations for the Department of Agriculture:

Where such samples [seeds of grasses, clover, or alfalfa secured in the open market] are found to be adulterated or misbranded, the results of the tests shall be published, together with the names of the persons by whom the seeds were offered for sale.

In carrying out the provisions of this act, 1,214 samples of seed were secured and analyzed under the direction of Mr. Edgar Brown, Botanist in Charge of the Seed Laboratory, and publication is here made of 204 samples found to be adulterated or misbranded, together with the names of the seedsmen by whom they were offered for sale.

ALFALFA AND RED CLOVER.

As none of the samples of alfalfa and red clover seed collected during the calendar year 1909 were found to be adulterated or misbranded, these seeds were not collected during the calendar year 1910.

ORCHARD GRASS.

Of the 317 samples obtained as orchard grass seed, 12 were found to be adulterated with seed of meadow fescue or rye-grass, as compared with 55 found in the calendar year 1909.

TABLE I.—Results of tests of samples of seed obtained in the open market as orchard grass seed and found to be adulterated or misbranded.

Seed offered for sale or sold as orchard grass by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Orchard grass seed.	Rye-grass and meadow fescue seed.	Other seeds.	Dirt and chaff.
Brewster, Crittenden & Co.	44 St. Paul street, Rochester, N. Y.	Mail (sample)...	Per ct. 49.47	Per ct. 29.21	Per ct. 1.54	Per ct. 19.78
Do.	do.	Purchase (bulk)...	59.77	19.89	1.73	18.61
Cone, J. H. & W. E.	87 Asylum street, Hartford, Conn.	Mail (sample)...	64.16	24.37	.15	11.32
Do.	do.	Purchase (bulk)...	64.67	21.70	.59	13.04
Philips-Thompson Co.	Wilmington, Del.	Mail (sample)...	34.86	26.96	6.49	31.69
Do.	do.	Purchase (bulk)...	35.95	27.41	13.58	23.06
Reyburn, T. T.	Fifth and Cherokee streets, Leavenworth, Kans.	Mail (sample)...	34.74	37.87	.93	26.46
Do.	do.	Purchase (bulk)...		94.86	2.07	3.07
Sanders & Co., B. B.	343 Broadway, Albany, N. Y.	Mail (sample)...	61.29	26.77	.50	11.44
Do.	do.	Purchase (bulk)...	59.08	26.98	.59	13.35
Stokes, Walter P.	219 Market street, Philadelphia, Pa.	Mail (sample)...	47.03		36.61	16.36
Do.	do.	Purchase (bulk)...	57.45		30.61	11.94

¹ Winter rape, 5.96 per cent. Crested dog's-tail, 4.10 per cent. ² Smooth chess, 34.10 per cent.

³ Smooth chess, 19.32 per cent. Sorrel, 11.09 per cent.

KENTUCKY BLUEGRASS.

Of 371 samples of seed obtained as Kentucky bluegrass, 16 were found to be wholly or in part seed of Canada bluegrass. This is practically the same number of adulterated and misbranded samples that was found in the calendar year 1909.

TABLE II.—Results of tests of samples of seed obtained in the open market as Kentucky bluegrass seed and found to be adulterated or misbranded.

Seed offered for sale or sold as Kentucky bluegrass by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Kentucky bluegrass seed.	Canada bluegrass seed.	Other seed.	Dirt and chaff.
Barstow & Co., J. P....	23 Water street, Norwich, Conn.	Mail (sample)...	<i>Per ct.</i> 0.24	<i>Per ct.</i> 81.41	<i>Per ct.</i> 4.80	<i>Per ct.</i> 13.55
Do.....	do.....	Purchase (bulk)....	.08	82.36	4.20	13.36
Henry & Missert.....	92 Michigan street, Buffalo, N. Y.	Mail (sample)...	.17	21.70	¹ 45.42	² 32.71
Do.....	do.....	Purchase (bulk)....	.09	23.38	² 45.39	31.14
Do.....	do.....	Mail (sample)....	.53	39.58	³ 34.67	25.22
Do.....	do.....	Purchase (bulk)....	.92	47.54	⁴ 29.04	22.50
Minnesota Seed Co....	New Ulm, Minn.....	Mail (sample)....	16.40	33.92	⁵ 11.59	38.09
Do.....	do.....	Purchase (bulk)....	12.92	22.86	⁶ 9.19	55.03
Olds & Whipple.....	164 State street, Hartford, Conn.	Mail (sample)....	.47	78.45	⁷ 5.39	15.69
Do.....	do.....	Purchase (bulk)....	.15	76.40	⁸ 8.97	14.48
Peterson, N.....	701 South Washington avenue, Ludington, Mich.	Mail (sample)....	74.59	⁹ 11.24	14.17
Do.....	do.....	Purchase (bulk)....	.07	72.30	¹⁰ 11.23	16.40
Schmidt & Botley Co., The.	Springfield, Ohio.....	Mail (sample)....	16.12	25.12	¹¹ 28.90	29.86
Do.....	do.....	Purchase (bulk)....	18.53	29.24	¹² 30.81	21.42
Stoecker Seed Co.....	117 South Washington street, Peoria, Ill.	Mail (sample)....	.32	80.68	3.50	15.50
Do.....	do.....	Purchase (bulk)....	.48	78.76	6.39	14.37

¹ Timothy, 21.58 per cent. Redtop or bent-grass, 12.01 per cent.

² Timothy, 18.62 per cent. Redtop or bent-grass, 14.94 per cent.

³ Timothy, 15.81 per cent. Redtop or bent-grass, 10.96 per cent.

⁴ Timothy, 17.79 per cent. Redtop or bent-grass, 5.29 per cent.

⁵ Redtop or bent-grass, 5.71 per cent.

⁶ Redtop or bent-grass, 4.99 per cent.

⁷ Timothy, 5.10 per cent.

⁸ Timothy, 8.51 per cent.

⁹ Timothy, 8.99 per cent.

¹⁰ Timothy, 8.75 per cent.

¹¹ Redtop or bent-grass, 17.22 per cent.

¹² Redtop or bent-grass, 20.33 per cent.

REDTOP.

Redtop seed was collected for the first time in 1910. Of the 526 samples secured, 176 were found to contain timothy seed. It is recognized that timothy and redtop grow together and that the two seeds are frequently harvested together in varying proportions. Seed buyers when working in the redtop-seed-producing region carry simple apparatus and determine the approximate purity of the seed (including the presence of timothy) before buying. Thus not only the presence but the quantity of timothy seed in redtop seed is known at the time redtop seed comes into the trade. In the samples reported on in Table III no mention was made by the dealer that any other seed was present.

TABLE III.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Red-top seed.	Timothy seed.	Other seed.	Dirt and chaff.
Anderson, H. O.....	Columbus, Wis.....	Mail (sample)...	Per ct. 69.04	Per ct. 10.80	Per ct. 5.32	Per ct. 14.84
Do.....	do.....	Purchase (bulk)...	68.79	10.93	5.17	15.11
Anderson Seed Co., The	513 Sprague avenue, Spokane, Wash.	Mail (sample)...	85.46	9.47	.19	4.88
Do.....	do.....	Purchase (bulk)...	83.72	11.76	.30	4.22
Bailey & Sons Co.....	61 East Second South street, Salt Lake City, Utah.	Mail (sample)...	70.08	9.97	1.08	18.87
Do.....	do.....	Purchase (bulk)...	67.39	14.37	2.17	16.07
Barrett Co., The W. E.	65 Canal street, Providence, R. I.	Mail (sample)...	81.91	12.00	.19	5.90
Do.....	do.....	Purchase (bulk)...	88.09	7.16	.30	4.45
Beveridge & Co., S. T.	1217 East Cary street, Richmond, Va.	Mail (sample)...	82.43	11.10	.39	6.08
Do.....	do.....	Purchase (bulk)...	80.48	14.38	.09	5.05
Bolgiano & Son, J.....	Light and Pratt streets, Baltimore, Md.	do.....	77.79	11.93	.39	9.89
Brown, A. C.....	217 South Fifth street, Springfield, Ill.	Mail (sample)...	80.17	12.17	.73	6.93
Do.....	do.....	Purchase (bulk)...	79.38	13.47	.09	7.06
Buffington & Co., J. J.	5 West Lombard street, Baltimore, Md.	Mail (sample)...	43.34	25.22	11.88	19.56
Do.....	do.....	Purchase (bulk)...	43.46	24.94	11.85	19.75
Burnett Bros.....	72 Cortlandt street, New York, N. Y.	Mail (sample)...	66.60	23.41	.46	9.53
Do.....	do.....	Purchase (bulk)...	59.70	27.44	.28	12.58
Burt & Co., N. J.....	110 North Main street, Burlington, Iowa.	Mail (sample)...	74.45	16.63	.80	8.12
Do.....	do.....	Purchase (bulk)...	75.75	16.65	.33	7.27
Cannon Floral & Seed Co., The.	Lafayette, Colo.	Mail (sample)...	78.64	7.62	2.45	11.29
Do.....	do.....	Purchase (bulk)...	.24	98.79	.49	.48
Central Seed Co.....	Wichita, Kans.	Mail (sample)...	66.73	14.09	7.14	12.04
Do.....	do.....	Purchase (bulk)...	64.27	13.39	11.12	11.22
Charleston Nursery & Seed Co.	29 Alderson street, Charleston, W. Va.	Mail (sample)...	82.15	9.07	.89	7.89
Do.....	do.....	Purchase (bulk)...	81.44	9.51	.37	8.68
Chandler's Sons, C.....	Broadway and Central street, Cleveland, Ohio.	do.....	39.03	9.03	1.26	50.68
Crosman Bros.....	503 Monroe avenue, Rochester, N. Y.	Mail (sample)...	78.69	15.83	.20	5.28
Do.....	do.....	Purchase (bulk)...	61.45	31.00	.75	6.80
Decker & Alrich.....	Fredericksburg, Va.	do.....	77.26	5.33	4.37	13.04
Dickinson Co., The Albert.	West Taylor street and the river, Chicago, Ill.	Mail (sample)...	54.41	21.11	4.26	20.22
Do.....	do.....	Purchase (bulk)...	68.99	13.44	3.01	14.56
Diggs & Beadles.....	1709 East Franklin street, Richmond, Va.	Mail (sample)...	81.02	9.73	1.35	7.90
Do.....	do.....	Purchase (bulk)...	79.93	9.90	1.99	8.18
Dorchester & Rose.....	Geneva, N. Y.	Mail (sample)...	77.70	14.86	.29	7.15
Do.....	do.....	Purchase (bulk)...	74.54	12.01	.29	13.16
Elliott & Sons, Wm.....	42 Vesey street, New York, N. Y.	Mail (sample)...	37.59	15.51	1.87	45.03
Do.....	do.....	Purchase (bulk)...	31.95	13.35	1.08	53.62
Farber Seed Co.....	731 South Fourth street, St. Joseph, Mo.	Mail (sample)...	77.35	11.01	1.43	10.21
Do.....	do.....	Purchase (bulk)...	75.67	8.97	1.33	14.03
Farmers' Supply Co.....	Roanoke, Va.	do.....	77.71	8.50	2.27	11.52
Field Seed Co., Henry	Shenandoah, Iowa.	Mail (sample)...	75.05	14.48	.47	10.00
Do.....	do.....	Purchase (bulk)...	78.41	8.23	1.35	12.01
Fiske Seed Co., H. E.	12 Faneuil Hall square, Boston, Mass.	Mail (sample)...	75.78	15.36	.38	8.48
Do.....	do.....	Purchase (bulk)...	63.01	28.57	.47	7.95
Flower & Co., S. W.....	Toledo, Ohio.	Mail (sample)...	78.68	13.00	.48	7.84
Do.....	do.....	Purchase (bulk)...	77.78	14.01	1.06	7.15
Fredonia Seed Co.....	28 Water street, Fredonia, N. Y.	Mail (sample)...	76.63	14.08	.09	9.20
Do.....	do.....	Purchase (bulk)...	73.27	16.68	.10	9.95
Frost, David C.....	758 West Short street, Lexington, Ky.	Mail (sample)...	74.35	16.07	.45	9.13
Do.....	do.....	Purchase (bulk)...	77.88	16.26	.19	5.67
Gate City Seed Co.....	Keokuk, Iowa.	Mail (sample)...	83.58	5.52	1.59	9.31
Do.....	do.....	Purchase (bulk)...	83.14	5.17	.97	10.72

TABLE III.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Red-top seed.	Timothy seed.	Other seed.	Dirt and chaff.
Gordinier, H. W.	Troy, N. Y.	Mail (sample)...	<i>Per ct.</i> 84.62	<i>Per ct.</i> 9.40	<i>Per ct.</i> .76	<i>Per ct.</i> 5.22
Do.	do.	Purchase (bulk)...	87.81	6.00	.09	6.10
Graf, H. L.	313 State street, New Albany, Ind.	Mail (sample)...	70.53	18.74	.20	10.53
Do.	do.	Purchase (bulk)...	81.24	12.38	.29	6.09
Grand Junction Seed Co.	325 Main street, Grand Junction, Colo.	Mail (sample)...	72.16	10.56	1.84	15.44
Do.	do.	Purchase (bulk)...	73.90	11.04	3.07	11.99
Grout, Charles F.	352 Twenty-fourth street, Ogden, Utah.	Mail (sample)...	75.10	10.24	2.46	12.20
Do.	do.	Purchase (bulk)...	72.88	10.73	2.92	13.47
Hardie Seed Co., David.	363 Elm street, Dallas, Tex.	Mail (sample)...	82.85	12.33	.34	4.48
Do.	do.	Purchase (bulk)...	80.38	14.34	.38	4.90
Hardin, Hamilton & Lewman.	112 South Second street, Louisville, Ky.	Mail (sample)...	80.79	10.61	.22	8.38
Do.	do.	Purchase (bulk)...	82.89	10.65	.28	6.18
Hirsch, Henry.	Archbold, Ohio.	Mail (sample)...	66.04	14.16	2.57	17.23
Do.	do.	Purchase (bulk)...	65.20	12.68	3.05	19.07
Hitchcock & Son, L. H.	126 Second avenue, Nashville, Tenn.	do.	66.51	28.73	.29	4.47
Hohberger, E. J.	409 East Fifth street, Des Moines, Iowa.	do.	79.27	6.68	1.82	12.23
Holmes Seed Co.	Harrisburg, Pa.	Mail (sample)...	75.26	18.12	.48	6.14
Do.	do.	Purchase (bulk)...	75.02	16.75	.29	7.94
Hunkel Co., G. H.	327 Chestnut street, Milwaukee, Wis.	Mail (sample)...	74.19	11.54	2.82	11.45
Do.	do.	Purchase (bulk)...	74.78	11.88	2.23	11.11
Illinois Seed Co., The.	236 Johnson street, Chicago, Ill.	Mail (sample)...	68.98	7.92	3.04	20.06
Do.	do.	Purchase (bulk)...	73.69	7.93	3.87	14.51
Imlay, John D.	54 North Fifth street, Zanesville, Ohio.	Mail (sample)...	61.22	21.39	.96	16.43
Do.	do.	Purchase (bulk)...	65.50	16.15	.60	17.75
Iowa Seed Co.	613 Locust street, Des Moines, Iowa.	do.	78.57	9.69	1.19	10.55
Isbell & Co., S. M.	Jackson, Mich.	Mail (sample)...	86.67	8.48	.26	4.59
Do.	do.	Purchase (bulk)...	87.24	7.79	4.97
Jameson, Hevener & Griggs.	181 East Sixth street, St. Paul, Minn.	Mail (sample)...	65.42	20.83	.68	13.07
Do.	do.	Purchase (bulk)...	72.82	12.44	1.25	13.49
Johnson & Son, L.	Oconomowoc, Wis.	Mail (sample)...	68.00	11.71	7.02	13.27
Do.	do.	Purchase (bulk)...	67.51	12.17	5.99	14.33
Johnson Seed Co.	217 Market street, Philadelphia, Pa.	Mail (sample)...	75.38	10.97	1.91	11.74
Do.	do.	Purchase (bulk)...	74.60	11.06	1.32	12.42
Jones, Milton T.	14 Liberty street, Utica, N. Y.	Mail (sample)...	79.27	12.83	.19	7.71
Do.	do.	Purchase (bulk)...	80.56	12.77	6.67
Livingston & Co., M.	119 North First street, Paducah, Ky.	Mail (sample)...	77.32	6.56	2.00	14.12
Do.	do.	Purchase (bulk)...	74.79	6.47	1.52	17.22
Livingston Seed Co., The.	Columbus, Ohio.	Mail (sample)...	84.04	7.98	.10	7.88
Do.	do.	Purchase (bulk)...	81.55	12.39	.18	5.88
Lynchburg Seed Co.	100 Ninth street, Lynchburg, Va.	Mail (sample)...	87.89	6.20	.20	5.71
Do.	do.	Purchase (bulk)...	84.71	7.02	.29	7.98
McLaughlin, Ward & Co.	140 East Pearl street, Jackson, Mich.	Mail (sample)...	76.99	7.37	1.10	14.54
Do.	do.	Purchase (bulk)...	75.98	6.57	1.97	15.48
Magill & Co.	Fargo, N. Dak.	Mail (sample)...	84.99	7.41	.48	7.12
Do.	do.	Purchase (bulk)...	71.82	17.55	.48	10.15
Manchester Hardware Co.	932 Elm street, Manchester, N. H.	Mail (sample)...	86.00	5.33	.09	8.58
Do.	do.	Purchase (bulk)...	81.21	10.71	.10	7.98
Mangelsdorf Bros. Co., The.	Athlison, Kans.	Mail (sample)...	84.82	8.93	.20	6.05
Do.	do.	Purchase (bulk)...	82.79	11.73	.29	5.19
Manns & Co., J.	Forest, corner Hillen street, Baltimore, Md.	Mail (sample)...	80.82	11.89	.19	7.10
Do.	do.	Purchase (bulk)...	77.35	17.23	.29	5.13
Market Gardeners' Seed Co.	120 East Court street, Cincinnati, Ohio.	Mail (sample)...	84.51	10.75	.29	4.45
Do.	do.	Purchase (bulk)...	87.78	7.18	.09	4.95

TABLE III.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Red-top seed.	Timothy seed.	Other seed.	Dirt and chaff.
Mather, R. A.	177 Main street, Canandaigua, N. Y.	do.	Per ct. 79.47	Per ct. 8.08	Per ct. 2.57	Per ct. 9.88
Minnesota Seed Co.	New Ulm, Minn.	Mail (sample)	80.70	16.04	1.23	2.03
Do.	do.	Purchase (bulk)	73.91	12.48	1.04	12.57
Missouri Seed Co.	1426 St. Louis avenue, Kansas City, Mo.	Mail (sample)	71.37	8.96	2.92	16.75
Do.	do.	Purchase (bulk)	88.85	9.81	.19	1.5
Mitchell Bros.	221 South Second street, St. Joseph, Mo.	Mail (sample)	75.00	12.69	.95	11.36
Do.	do.	Purchase (bulk)	83.04	12.25		4.71
Neely & Ferrall.	320 South Piedmont street, Canton, Ohio.	Mail (sample)	73.91	10.78	2.08	13.23
Do.	do.	Purchase (bulk)	73.55	9.85	1.93	14.67
Olds & Whipple.	164 State street, Hartford, Conn.	Mail (sample)	68.09	23.21	1.70	7.00
Do.	do.	Purchase (bulk)	52.02	39.72	2.88	5.38
Orndorff & Co., L. G.	635 Louisiana avenue NW, Washington, D. C.	Mail (sample)	81.35	7.02	1.44	10.19
Do.	do.	Purchase (bulk)	81.27	7.72	1.26	9.75
Ottumwa Seed Co.	209 South Court street, Ottumwa, Iowa.	Mail (sample)	50.34	35.75	1.35	12.56
Do.	do.	Purchase (bulk)	63.92	23.64	.94	11.50
Paxson & Rockefeller.	24 West Park street, Butte, Mont.	Mail (sample)	73.61	13.89	1.30	11.20
Do.	do.	Purchase (bulk)	75.80	13.04	1.33	9.83
Pearse & Co., W. G.	129 Second street, Fall River, Mass.	Mail (sample)	85.80	5.93	.29	7.98
Do.	do.	Purchase (bulk)	63.37	23.20	.10	13.33
Peterson, N.	701 South Washington avenue, Ludington, Mich.	Mail (sample)	73.18	10.86	2.11	13.85
Do.	do.	Purchase (bulk)	72.87	9.83	1.96	15.34
Philadelphia Seed Co., The	127 North Water street, Philadelphia, Pa.	Mail (sample)	82.89	6.58	.19	10.34
Do.	do.	Purchase (bulk)	85.69	6.15	.28	7.88
Pierce Seed & Produce Co.	Pueblo, Colo.	Mail (sample)	81.72	8.52	.95	8.81
Do.	do.	Purchase (bulk)	79.36	11.67	.19	8.78
Pino, Willis S.	41 Washington street, Providence, R. I.	Mail (sample)	79.14	13.03	.29	7.54
Do.	do.	Purchase (bulk)	75.74	14.95	.20	9.11
Rapier Grain & Seed Co.	Owensboro, Ky.	Mail (sample)	80.46	11.49	.20	7.85
Do.	do.	Purchase (bulk)	79.49	11.72	.28	8.51
Reichardt & Schulte.	206 Milam street, Houston, Tex.	do.	74.88	8.89	2.22	14.01
Robinson & Hutton.	Lexington, Va.	Mail (sample)	76.47	15.89	.57	7.07
Do.	do.	Purchase (bulk)	76.21	13.83	.87	9.09
Saco Grain & Milling Co.	Saco, Me.	Mail (sample)	70.81	19.98	.10	9.11
Do.	do.	Purchase (bulk)	66.64	23.33	.89	9.14
Schultz, G. Edward.	307 Tenth street NW, Washington, D. C.	Mail (sample)	79.32	7.41	3.32	9.95
Do.	do.	Purchase (bulk)	79.22	5.96	5.20	9.62
Scott & Co., William B.	8 Broadway, Newport, R. I.	Mail (sample)	29.76	16.40	.47	53.37
Do.	do.	Purchase (bulk)	27.60	26.21	.30	45.89
Shaeffer, W. E.	Lockport, N. Y.	Mail (sample)	74.88	15.78	.39	8.95
Do.	do.	Purchase (bulk)	74.21	17.25	.36	8.18
Shugart-Ouren Seed Co.	Council Bluffs, Iowa.	Mail (sample)	75.27	12.22	2.15	10.36
Do.	do.	Purchase (bulk)	74.24	11.36	1.99	12.41
Stegel, George L.	Erie, Pa.	Mail (sample)	79.93	13.08	.18	6.81
Do.	do.	Purchase (bulk)	80.29	11.60	.28	7.83
Sluis Seed Store.	544 West Sixty-third street, Chicago, Ill.	Mail (sample)	66.03	12.50	2.19	19.28
Do.	do.	Purchase (bulk)	68.85	9.99	2.65	18.51
Sprecher & Ganss.	Lancaster, Pa.	Mail (sample)	60.69	8.92	1.25	29.14
Do.	do.	Purchase (bulk)	61.78	33.56	.39	4.27
Stoecker Seed Co.	117 South Washington street, Peoria, Ill.	Mail (sample)	65.40	15.17	3.03	16.40
Do.	do.	Purchase (bulk)	67.76	12.80	2.41	17.03
Springfield Seed Co.	Campbell and Walnut streets, Springfield, Mo.	Mail (sample)	69.32	15.53	2.14	13.01
Do.	do.	Purchase (bulk)	57.91	23.48	6.43	12.18
Tacoma Imp. & Seed Co.	1350 Commerce street, Tacoma, Wash.	Mail (sample)	72.51	17.27	.86	9.36
Do.	do.	Purchase (bulk)	71.39	18.11	.93	9.57

TABLE III.—Results of tests of samples of seed obtained in the open market as redtop seed and found to be adulterated or misbranded—Continued.

Seed offered for sale or sold as redtop by—		Seed obtained by—	Seeds and inert matter found upon analysis of samples.			
Name of dealer.	Address.		Red-top seed.	Timothy seed.	Other seed.	Dirt and chaff.
Taneytown Grain & Supply Co.	Taneytown, Md.....	Mail (sample)...	Per ct. 78.00	Per ct. 7.78	Per ct. .39	Per ct. 13.83
Do.....	do.....	Purchase (bulk)...	74.88	8.79	.86	15.47
Texas Seed & Floral Co.	311 Pacific avenue, Dallas, Tex.	Mail (sample)...	75.34	9.20	2.25	13.21
Do.....	do.....	Purchase (bulk)...	75.05	9.79	2.30	12.86
Thompson & Co., H. D.	Malone, N. Y.....	Mail (sample)...	64.89	13.41	3.26	18.44
Do.....	do.....	Purchase (bulk)...	75.72	19.38	.24	4.66
Tinsley Seed Co.....	912 North Broadway, St. Louis, Mo.	Mail (sample)...	46.76	31.17	3.85	18.22
Do.....	do.....	Purchase (bulk)...	47.20	31.82	4.53	16.45
Do.....	do.....	Mail (sample)...	69.78	21.88	1.02	7.32
Do.....	do.....	Purchase (bulk)...	69.22	12.97	2.13	15.68
Tucker-Mosby Seed Co.	44 South Front street, Memphis, Tenn.	Mail (sample)...	46.62	31.12	3.50	18.76
Do.....	do.....	Purchase (bulk)...	47.00	29.72	4.40	18.88
Warren Co., D. W.	Norfolk, Va.....	do.....	79.09	7.62	3.90	9.39
Wernich Seed Co.....	27 Juneau avenue, Milwaukee, Wis.	Mail (sample)...	78.11	12.74	.28	8.87
Do.....	do.....	Purchase (bulk)...	82.13	10.06	.29	7.52
Winona Seed Co.....	110 Center street, Winona, Minn.	Mail (sample)...	74.60	13.00	2.21	10.19
Do.....	do.....	Purchase (bulk)...	78.28	9.46	1.35	10.91

While the adulteration of red clover and alfalfa seed has apparently ceased and the adulteration or misbranding of orchard grass and Kentucky bluegrass seed has been reduced until it is practically negligible, it is evident that seed merchants are not using the same care in the labeling and selling of redtop seed, which is now being reported on for the first time, that they are using in the case of the other seeds mentioned. Purchasers should, therefore, be especially careful to see that seed offered as redtop is free from timothy.

As has been formerly stated in its publications, the Department of Agriculture will examine and report promptly as to the presence of adulterants and dodder in any samples of seed submitted for that purpose. According to the location of the sender these may be submitted to the Seed Laboratory at Washington, D. C., or to any of the following laboratories maintained through the cooperation of this Department: Branch Seed-Testing Laboratory, Agricultural Experiment Station, Columbia, Mo.; Branch Seed-Testing Laboratory, Agricultural Experiment Station, Lincoln, Nebr.; Branch Seed-Testing Laboratory, Oregon Agricultural College, Corvallis, Oreg.; Branch Seed-Testing Laboratory, Purdue University Agricultural Experiment Station, La Fayette, Ind.; Branch Seed-Testing Laboratory, North Carolina Department of Agriculture, Raleigh, N. C.

WM. A. TAYLOR,
Acting Chief, Bureau of Plant Industry.

Approved:

JAMES WILSON,
Secretary of Agriculture.

WASHINGTON, D. C., March 16, 1911.

